

SEP 16 2003

TECH CENTER 16



1600

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003  
TIME: 13:44:28

Input Set : A:\substitute Seq\_list 1581\_0840001.txt  
Output Set: N:\CRF4\09122003\I942583A.raw

5 <110> APPLICANT: Robinson, Andrew  
6 Gorringe, Andrew  
7 Hudson, Michael  
8 Bracegirdle, Phillipa  
9 Kroll, John  
10 Cartwright, Keith  
11 Webb, Steven  
12 Langford, Paul  
13 Reddin, Karen  
14 O'Dwyer, Cliona  
16 <120> TITLE OF INVENTION: Neisserial Vaccine Compositions and Methods  
18 <130> FILE REFERENCE: 1581.0840001  
20 <140> CURRENT APPLICATION NUMBER: US 09/942,583A  
21 <141> CURRENT FILING DATE: 2001-08-31  
23 <150> PRIOR APPLICATION NUMBER: PCT/GB00/00624  
24 <151> PRIOR FILING DATE: 2000-02-22  
26 <160> NUMBER OF SEQ ID NOS: 16  
28 <170> SOFTWARE: PatentIn version 3.0  
31 <210> SEQ ID NO: 1  
32 <211> LENGTH: 19  
33 <212> TYPE: DNA  
34 <213> ORGANISM: Unknown  
36 <220> FEATURE:  
37 <223> OTHER INFORMATION: PCR primer  
39 <400> SEQUENCE: 1  
40 gcagtctctc gagctcaag 19  
43 <210> SEQ ID NO: 2  
44 <211> LENGTH: 19  
45 <212> TYPE: DNA  
46 <213> ORGANISM: Unknown  
48 <220> FEATURE:  
49 <223> OTHER INFORMATION: PCR Primer  
51 <400> SEQUENCE: 2  
52 cctctccact gagagaaaa 19  
55 <210> SEQ ID NO: 3  
56 <211> LENGTH: 17  
57 <212> TYPE: DNA  
58 <213> ORGANISM: Unknown  
60 <220> FEATURE:  
61 <223> OTHER INFORMATION: PCR Primer  
63 <400> SEQUENCE: 3  
64 gtaaaacgac ggccagt 17  
67 <210> SEQ ID NO: 4

ENTERED

RAW SEQUENCE LISTING DATE: 09/12/2003  
PATENT APPLICATION: US/09/942,583A TIME: 13:44:28

Input Set : A:\substitute Seq\_list 1581\_0840001.txt  
Output Set: N:\CRF4\09122003\I942583A.raw

68 <211> LENGTH: 17  
69 <212> TYPE: DNA  
70 <213> ORGANISM: Unknown  
72 <220> FEATURE:  
73 <223> OTHER INFORMATION: PCR Primer  
75 <400> SEQUENCE: 4  
76 aacagctatg gaccatg 17  
79 <210> SEQ ID NO: 5  
80 <211> LENGTH: 19  
81 <212> TYPE: DNA  
82 <213> ORGANISM: Unknown  
84 <220> FEATURE:  
85 <223> OTHER INFORMATION: Sequencing Primer  
87 <400> SEQUENCE: 5  
88 gcagtctctc gagctcaag 19  
91 <210> SEQ ID NO: 6  
92 <211> LENGTH: 22  
93 <212> TYPE: DNA  
94 <213> ORGANISM: Unknown  
96 <220> FEATURE:  
97 <223> OTHER INFORMATION: Sequencing Primer  
99 <400> SEQUENCE: 6  
100 cgctttacac tttatgcttc cg 22  
103 <210> SEQ ID NO: 7  
104 <211> LENGTH: 17  
105 <212> TYPE: DNA  
106 <213> ORGANISM: Unknown  
108 <220> FEATURE:  
109 <223> OTHER INFORMATION: Sequencing Primer  
111 <400> SEQUENCE: 7  
112 gtaaaacgac ggccagt 17  
115 <210> SEQ ID NO: 8  
116 <211> LENGTH: 17  
117 <212> TYPE: DNA  
118 <213> ORGANISM: Unknown  
120 <220> FEATURE:  
121 <223> OTHER INFORMATION: Sequencing Primer  
123 <400> SEQUENCE: 8  
124 aacagctatg gaccatg 17  
127 <210> SEQ ID NO: 9  
128 <211> LENGTH: 76  
129 <212> TYPE: DNA  
130 <213> ORGANISM: Unknown  
132 <220> FEATURE:  
133 <223> OTHER INFORMATION: Linker Sequence  
135 <220> FEATURE:  
136 <221> NAME/KEY: misc\_feature  
137 <222> LOCATION: (1)..(5)  
138 <223> OTHER INFORMATION: Bam HI restriction site

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003  
 TIME: 13:44:28

Input Set : A:\substitute Seq\_list 1581\_0840001.txt  
 Output Set: N:\CRF4\09122003\I942583A.raw

```

140 <220> FEATURE:
141 <221> NAME/KEY: misc_feature
142 <222> LOCATION: (75)..(76)
143 <223> OTHER INFORMATION: XbaI restriction site
145 <220> FEATURE:
146 <221> NAME/KEY: misc_feature
147 <222> LOCATION: (8)..(15)
148 <223> OTHER INFORMATION: NotI restriction site
150 <220> FEATURE:
151 <221> NAME/KEY: misc_feature
152 <222> LOCATION: (16)..(21)
153 <223> OTHER INFORMATION: SnaBI restriction site
155 <220> FEATURE:
156 <221> NAME/KEY: misc_feature
157 <222> LOCATION: (22)..(33)
158 <223> OTHER INFORMATION: NcoI restriction site
160 <220> FEATURE:
161 <221> NAME/KEY: misc_feature
162 <222> LOCATION: (34)..(39)
163 <223> OTHER INFORMATION: SmaI restriction site
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: (46)..(51)
168 <223> OTHER INFORMATION: PstI restriction site
170 <220> FEATURE:
171 <221> NAME/KEY: misc_feature
172 <222> LOCATION: (52)..(75)
173 <223> OTHER INFORMATION: neisserial uptake sequence
175 <400> SEQUENCE: 9
176 gatccggcg gccgctacgt accatggag ctgccccggg tccagctgca ggccgtctga 60
177 atcatttcaag acggct 76
181 <210> SEQ ID NO: 10
182 <211> LENGTH: 77
183 <212> TYPE: DNA
184 <213> ORGANISM: Unknown
186 <220> FEATURE:
187 <223> OTHER INFORMATION: Complimentary Sequence to SEQ ID NO: 9
189 <400> SEQUENCE: 10
190 cttagagccgt ctgaaaatgat tcagacggcc tgcaagctgga ccccgggcag ctcccatgg 60
191 acgttagcggc cgccggg 77
195 <210> SEQ ID NO: 11
196 <211> LENGTH: 20
197 <212> TYPE: DNA
198 <213> ORGANISM: Unknown
200 <220> FEATURE:
201 <223> OTHER INFORMATION: Artificial sequence, alternative 5' end
203 <400> SEQUENCE: 11
204 tttttggaga attgaccatg 20
207 <210> SEQ ID NO: 12

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003

TIME: 13:44:28

Input Set : A:\substitute Seq\_list 1581\_0840001.txt  
 Output Set: N:\CRF4\09122003\I942583A.raw

208 <211> LENGTH: 591  
 209 <212> TYPE: DNA  
 210 <213> ORGANISM: Unknown  
 212 <220> FEATURE:  
 213 <223> OTHER INFORMATION: Artificial Sequence Comprising Expression Cassette of nspA  
 215 <400> SEQUENCE: 12  
 216 tgaccataaa ggaaccaaaa tatgaaaaaaaaa gcacttgcca cactgattgc cctcgctctc 60  
 218 ccggccgcgc cactggcgga aggcgcatcc ttacgtcca agccgatgcc gcacacgcaa 120  
 220 aagcctcaag ctcttaggt tctgccaaag gcttcagccc ggcgcattcc gcaggctacc 180  
 222 gcatcaacga cctccgcttc gccgtcgatt acacgcgcta caaaaaactat aaagccccat 240  
 224 ccaccgattt caaactttac agcatcgcg cggtccgcat ttacgacttc gacacccaat 300  
 226 cggccgtcaa accgttatctc ggcgcgcgt tgacgcctaa ccgcgcctcc gtcgacttgg 360  
 228 gcggcagcga cagcttcagc caaaccttca tcggcctcg cgtattgacg ggcgtaagct 420  
 230 atgccgttac cccgaatgtc gatttggatg ccggctaccg ctacaactac atcggcaaag 480  
 232 tcaacactgt caaaaacgtc cggtccgat aactgtccgt cggcgtgcgc gtcaaattct 540  
 234 gatatgcgcc ttattctgca aaccgcggag ctttcggcgg ttttgtttc t 591  
 238 <210> SEQ ID NO: 13  
 239 <211> LENGTH: 138  
 240 <212> TYPE: DNA  
 241 <213> ORGANISM: Unknown  
 243 <220> FEATURE:  
 244 <223> OTHER INFORMATION: pMIDG100 partial sequence  
 246 <400> SEQUENCE: 13  
 247 actagtaacc gagccgcct aatgagcggt cttttttttt cagtctctcg agctcaagct 60  
 249 tcgaattctg cagtcgacgg taccgcgggc ccgggatccg ctagcagtt taagatttt 120  
 251 ggagaattga ccatgagt 138  
 254 <210> SEQ ID NO: 14  
 255 <211> LENGTH: 48  
 256 <212> TYPE: DNA  
 257 <213> ORGANISM: Unknown  
 259 <220> FEATURE:  
 260 <223> OTHER INFORMATION: pMIDG100 partial sequence  
 262 <400> SEQUENCE: 14  
 263 tagcatttagt agccgcctaa tgagcggtt ttttttttgc gttctaga 48  
 266 <210> SEQ ID NO: 15  
 267 <211> LENGTH: 68  
 268 <212> TYPE: DNA  
 269 <213> ORGANISM: Unknown  
 271 <220> FEATURE:  
 272 <223> OTHER INFORMATION: pMIDG201 partial sequence  
 274 <400> SEQUENCE: 15  
 275 actagtaacc gagccgcct aatgagcggt cttttttttt cagtctctcg agctcaagct 60  
 277 tcgaattc 68  
 280 <210> SEQ ID NO: 16  
 281 <211> LENGTH: 83  
 282 <212> TYPE: DNA  
 283 <213> ORGANISM: Unknown  
 285 <220> FEATURE:  
 286 <223> OTHER INFORMATION: pMIDG201 partial sequence

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003

TIME: 13:44:28

Input Set : A:\substitute Seq\_list 1581\_0840001.txt  
Output Set: N:\CRF4\09122003\I942583A.raw

288 <400> SEQUENCE: 16  
289 ggatccccgc ggccggctac gtaccatggg agctgcccgg ggtccagctg caggctgtct 60  
291 gaatcatttc agacggctct aga 83

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003

TIME: 13:44:29

Input Set : A:\substitute Seq\_list 1581\_0840001.txt  
Output Set: N:\CRF4\09122003\I942583A.raw